```
(FILE 'USPAT' ENTERED AT 11:45:24 ON 28 JUN 1999)
L1      47010 S (ETCH? OR REMOVE? OR CLEAN?) AND WAFER?
L2      10705 S (ETCH? OR REMOVE? OR CLEAN?) AND (ORGANIC(P)CONTAMINANT?
 OR
L3       1988 S L1 AND L2
L4          8 S L3 AND (252/79.3/CCLS)
L5        173 S L3 AND (WATER AND OZONE AND CARBOXYLIC(1W)ACID OR CITRIC
(1W
L6          4 S L5 AND (252/79.3/CCLS)
L7         42 S L3 AND (134/2/CCLS)
```

5,855,811

=> d ab kwic cit

US PAT NO: 4,353,779 [IMAGE AVAILABLE]   L5: 1 of 1

ABSTRACT:
An **etching** solution for III/V semiconductor material, such as gallium
arsenide, consists essentially of: 20 to 90 vol. % of **phosphoric
acid** solution; 15 to 80 vol. % of hydrogen peroxide solution; 0 to 60
vol. % of water; and an amount of fluorine ion effective to provide at
least 0.01 mole of fluorine ion per liter of solution, said solution
being effective to **etch** without evolving a gaseous product.
TITLE: Wet chemical **etching** of III/V semiconductor material
                  without gas evolution

handwritten annotations:

134/2

(438/745) ; 252/79.3

* 5,640,703 — H2O + Carboxylic Acid + Conditioning agent

5,837,662 => Citric Acid, + HF + Alk. + sulfur...

5,776,351 → H2O + O3

(5,776,351
  5,513,598 } ... + liquid bright

  5,705,089 = phosphoric ...

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      (FILE 'USPAT' ENTERED AT 09:14:36 ON 28 JUN 1999)
L1        5787 S  (REMOVE? OR CLEAN?) AND (ORGANIC(1W)CONTAMINANTS OR PHOT
O-R
L2         159 S  L1 AND (WATER AND OZONE AND ACETIC(1W)ACID OR CITRIC(1W)
ACI
L3           5 S  L2 AND (252/79.3/CCLS)
L4           0 S  L2 AND (438/745/CCLS AND 134/CLAS )
L5          20 S  L2 AND (438/745/CCLS OR 134/CLAS )
L6         367 S  L1 AND (WATER AND OZONE OR 03 AND CARBOXYLIC(1W)ACID OR
PHO
L7          93 S  L6 AND (CITRIC(1W)ACID OR ACETIC(1W)ACID AND HCL OR HYDR
OCH

=> s 16 and (liquid(1w)mist or acid(1w)mist)

        619139 LIQUID
         16359 MIST
           509 LIQUID(1W)MIST
        460199 ACID
         16359 MIST
           359 ACID(1W)MIST
L8           2 L6 AND (LIQUID(1W)MIST OR ACID(1W)MIST)
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=> s (etch? or remove? or clean?) and (organic(p)contaminant? or
photo(1w)resist)

           102958 ETCH?
          1115441 REMOVE?
           313664 CLEAN?
           371922 ORGANIC
            66715 CONTAMINANT?
             6862 ORGANIC(P)CONTAMINANT?
            74524 PHOTO
           107551 RESIST
             4515 PHOTO(1W)RESIST
  L1        10705 (ETCH? OR REMOVE? OR CLEAN?) AND (ORGANIC(P)CONTAMINANT? OR
  PH
                  OTO(1W)RESIST)

=> s l1 and (water and ozone and hcl or hf or co2 or hno3)

           751508 WATER
            18647 OZONE
            95171 HCL
            28745 HF
             1993 CO2
              145 HNO3
  L2          895 L1 AND (WATER AND OZONE AND HCL OR HF OR CO2 OR HNO3)

=> s l2 and (134/clas or 438/clas)

            24273 134/CLAS
            29496 438/CLAS
  L3          327 L2 AND (134/CLAS OR 438/CLAS)

=> s l2 and (carboxylic(1w)acid or phosphoric(1w)acid or acetic(1w)acid)

           126471 CARBOXYLIC
           460199 ACID
            94248 CARBOXYLIC(1W)ACID
            82568 PHOSPHORIC
           460199 ACID
            67046 PHOSPHORIC(1W)ACID
           135323 ACETIC
           460199 ACID
           119969 ACETIC(1W)ACID
  L4          269 L2 AND (CARBOXYLIC(1W)ACID OR PHOSPHORIC(1W)ACID OR ACETIC(
  1W)
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